WHAT IS CLAIMED IS:

1. A method of correcting a color value generated by a forward model for a color input device, comprising clipping the color value to a boundary of a visual gamut in a color space.

2. The method of claim 1, wherein clipping the color value comprises:

clipping a luminance of the color value in a luminance space; and

clipping a chromaticity of the color value in a chromaticity space.

3. The method of claim 2, further comprising clipping the luminance at a lower bound.

4. The method of claim 3, wherein the luminance is allowed to exceed the luminance of a white point in the color space.

5. The method of claim 2, wherein clipping the color value further comprises:

determining at the clipped luminance a locus of the visual gamut on a chromaticity plane;

determining a vector from a white point to the color value at the clipped luminance; and

clipping the chromaticity of the color value to an intersection of the vector and the locus.

6. The method of claim 2, wherein the boundary is the ISO standard CIE spectral locus on a chromaticity space.

7. The method of claim 6, wherein the chromaticity space is the CIE chromaticity xy plane.

8. The method of claim 6, wherein the chromaticity space is the CIE Uniform Chromaticity Scale (UCS) u'v' plane.

9. The method of claim 1, wherein the color space is CIEXYZ.

10. The method of claim 1, wherein the color space is CIELUV.

11. The method of claim 1, wherein the color space is CIELAB.

12. A data processing system for correcting a color value generated by a forward model for a color input device, comprising:

a processor;

a memory coupled to the processor, the memory having program instructions executable by the processor stored therein, the program instructions comprising:

clipping the color value to a boundary of a visual gamut in a color space.

13. The data processing system of claim 12, the program instructions further comprising:

clipping a luminance of the color value in a luminance space; and

clipping a chromaticity of the color value in a chromaticity space.

14. The data processing system of claim 13, the program instructions further comprising clipping the luminance at a lower bound.

15. The data processing system of claim 14, wherein the luminance value is allowed to exceed the luminance value of a white point in the color space.

16. The data processing system of claim 13, the program instructions further comprising:

determining at the clipped luminance a locus of the visual gamut on a chromaticity plane;

determining a vector from a white point to the color value at the clipped luminance; and

clipping the chromaticity to an intersection of the vector and the locus.

17. The data processing system of claim 16, wherein the locus is the ISO standard CIE spectral locus on a chromaticity space.

18. The data processing system of claim 17, wherein the chromaticity space is the CIE chromaticity xy plane.

19. The data processing system of claim 17, wherein the chromaticity space is the CIE Uniform Chromaticity Scale (UCS) u'v' plane.

20. The data processing system of claim 12, wherein the color space is CIEXYZ.

21. The data processing system of claim 12, wherein the color space is CIELUV.

22. The data processing system of claim 12, wherein the color space is CIELAB.

23. A computer readable media having program instructions for correcting a color value generated by a forward model for a color input device, the program instructions comprising:

clipping the color value to a boundary of a visual gamut in a color space.

24. The computer readable media of claim 23, the program instructions further comprising:

clipping a luminance of the color value in a luminance space; and

clipping a chromaticity of the color value in a chromaticity space.

25. The computer readable media of claim 24, the program instructions further comprising clipping the luminance at a lower bound.

26. The computer readable media of claim 25, wherein the luminance value is allowed to exceed the luminance value of a white point in the color space.

27. The computer readable media of claim 26, the program instructions further comprising:

determining at the clipped luminance a locus of the visual gamut on a chromaticity plane;

determining a vector from a white point to the color value at the clipped luminance; and

clipping the chromaticity to an intersection of the vector and the locus.

28. The computer readable media of claim 27, wherein the locus is the ISO standard CIE spectral locus on a chromaticity space.

29. The computer readable media of claim 28, wherein the chromaticity space is the CIE chromaticity xy plane.

30. The computer readable media of claim 28, wherein the chromaticity space is the CIE Uniform Chromaticity Scale (UCS) u'v' plane.

31. The computer readable media of claim 23, wherein the color space is CIEXYZ.

32. The computer readable media of claim 23, wherein the color space is CIELUV.

33. The computer readable media of claim 23, wherein the color space is CIELAB.